

Class 07

Topics

- PropertyChangeListener Pattern
 - PropertyChangeListener Interface
 - SimplePropertyDumper Example
 - SimpleStatsTimeVarying
- SimEventListener Pattern
 - SimEntityBase Implementation
 - Use of “Resonance” to Process SimEvents

PropertyChangeListener

Basics

- When a state variable changes value in a Simkit model, it should fire a PropertyChangeEvent
- This is done via the “firePropertyChange()” method, which is inherited from SimEntityBase
- Many signatures possible. We have seen (String, int) and (String, int, int)
- First argument is always the “name” of the property

- In a two-argument case, second argument is the new value
- In a three-argument case, second argument is old value, third is new value
- Objects may register “interest” in a PropertyChangeSource’s PropertyChangeEvents by “addPropertyChangeListener()” method
- Must implement java.beans.PropertyChangeListener interface
- When PropertyChangeEvent is fired, all registered listeners “hear” the event via call to propertyChange(PropertyChangeEvent) method

SimplePropertyDumper

- public void propertyChange
(PropertyChangeEvent e) {
 System.out.println (e.getPropertyName () +
 ": " +
 e.getOldValue () + " => " +
 e.getNewValue ());
}

SimpleStatsTimeVarying

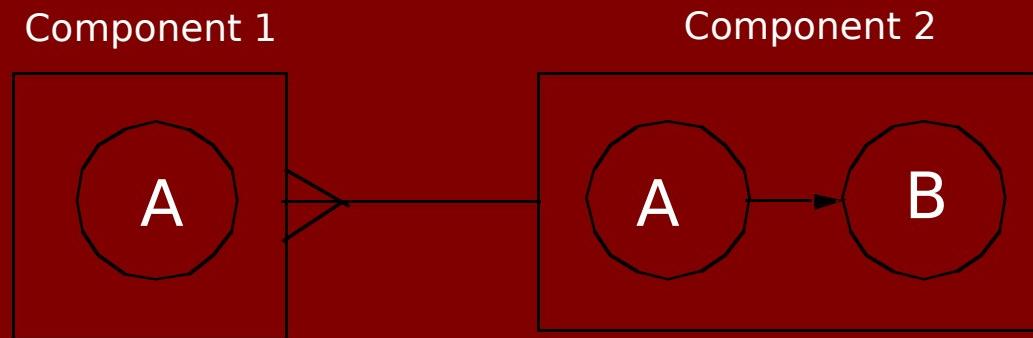
- Keeps an instance variable of the name of the property for which it is listening
- If it hears a PropertyChangeEvent with that name, it updates its statistics:

```
public void propertyChange (PropertyChangeEvent e) {  
    if (e.getPropertyName () .equals (myPropertyName) {  
        newObservation( ((Number) e.getNewValue() )  
.doubleValue());  
    }  
}
```

SimpleStatsTally

- Similar, except that the Tally algorithm is used

SimEventListener



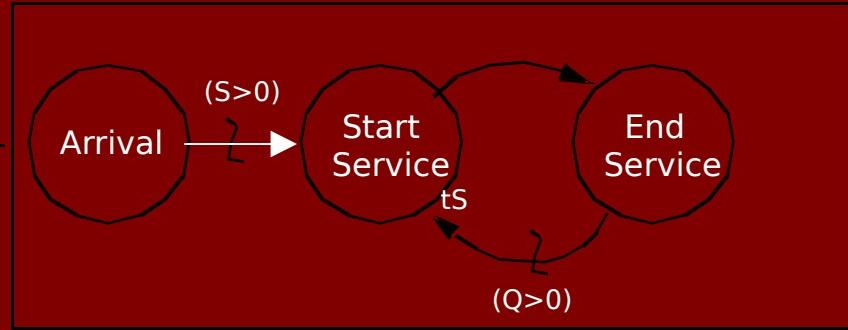
When event A occurs in Component 1, then event A is triggered in Component 2

```
one.addSimEventListener(two)
```

Arrival Process



Server



```
main(): Arrival Process = new ????? (.....);  
        Server server = new Server (.....);  
        arrival.addSimEventListenser(server)
```